

REMARKS

Claims 1-5 and 7-18 are pending in the present application. Claim 15 has been amended. Claims 1 and 13-15, and 17, are independent claims. The Examiner is respectfully requested to reconsider the outstanding rejections in view of the above Amendments and the following Remarks.

Allowable Subject Matter

It is gratefully acknowledged that the Examiner has allowed claims 13 and 14.

Rejection Under 35 U.S.C. § 103

Abe/Yamamoto Rejection

Claims 1, 3-5, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Publication JP 06-303171 to Abe et al. (hereafter “Abe”) in view of U.S. Patent No. 6,151,372 to Yamamoto (hereafter “Yamamoto”). This rejection is respectfully traversed.

In the rejection, the Examiner concedes, “Abe fails to disclose an estimated power value obtained from the result of channel characteristic estimation using a reference signal contained in the first received signal” (Office Action at page 3, 3rd paragraph). However, the Examiner imports the teachings of the newly cited Yamamoto to remedy this deficiency.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness based on the proposed combination of Abe and Yamamoto.

Synopsis of Yamamoto (Newly Cited)

Yamamoto teaches a diversity receiver with multiple branches, each branch containing an antenna, orthogonal detector, analog/digital converter, and Fourier transform circuit (Fig. 1). Yamamoto estimates a propagation path characteristic for each branch based on a known

reference signal. In Yamamoto, the multiple branches are input to a diversity processing unit 60. In one embodiment, Yamamoto teaches that the diversity processing unit uses the estimated propagation path characteristic to perform maximum ratio combination of the Fourier-transformed signals of the respective branches (col. 4, lines 6-57; Fig. 2). In an alternative embodiment, Yamamoto's diversity processing unit uses the estimated propagation path characteristic to perform selective diversity, i.e., select the branch signal exhibiting the highest wave amplitude based on the propagation path characteristic (col. 5, lines 8-37; Fig. 3). However, in both embodiments, the signals are input to Yamamoto's demodulator 90 *after* being diversity processed by the diversity processing unit.

Abe and Yamamoto Fail to Teach or Suggest Every Claimed Feature

MPEP § 2143.03 sets forth the following requirements for a proper rejection under 35 U.S.C. § 103:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.
In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicant respectfully submits that the prior art fails to provide a teaching or suggestion of all of the features in the claimed invention.

Particularly, independent claims 1 and 15 recite selecting one of the *demodulated* signals output from the demodulation paths, combining the *demodulated signals* output from the plurality of demodulation paths with predetermined gains, and outputting either the selected *demodulated* signal or the combined *demodulated* signal responsive to a power ratio comparison. Abe and Yamamoto, taken separately or in combination, fail to teach or suggest these features.

As discussed above, Yamamoto's invention expressly discloses that the demodulator 90 does not operate on the signals until *after* they are diversity processed by the diversity processing unit (see Fig. 1; col. 2, lines 49-57). Thus, Yamamoto's diversity processing unit can neither combine *demodulated* signals nor select a *demodulated* signal output from the branches. In

Yamamoto, demodulation only occurs after a combined or selected signal is output from diversity processing unit.

Further, in Abe, there is no teaching or suggestion that either of the branches demodulates its signal before outputting the signal to the synthetic section 5 (for combining signals) or the selection switch 6. Accordingly, Abe's invention does not combine *demodulated* signals output from the respective branches, nor does it select from *demodulated* signals output from the respective branches.

In view of the foregoing, Applicant respectfully submits that the Examiner's proposed combination of Abe and Yamamoto fails to teach or suggest the claimed elements of combining the demodulated signals output from a plurality of demodulation paths, selecting one of the demodulated signals output from the plurality of demodulation paths, and outputting either the combined demodulated signal or the selected demodulated signal based on a comparison of power ratios, as recited in claims 1 and 15. At least for this reason, Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

Fact that References can be Combined does NOT Render Combination Obvious

In the rejection, the Examiner asserts,

"[I]t would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Yamamoto into the diversity receiver of Abe et al. as to use a reference signal contained in the received signal for estimating the power level, as an alternative of using the received data signal." (Office Action at page 4, 2nd paragraph)

However, Applicant respectfully submits that the Examiner's statement does not provide any reason why one of ordinary skill would have combined Abe and Yamamoto in such a way. As such, the Examiner appears to assert that the Abe/Yamamoto combination is obvious merely because these references can be combined.

In response, Applicant respectfully refers the Examiner to MPEP § 2143.01, which states that the fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness. Further, Applicant respectfully submits that this legal principle has not been overturned by recent case law. For instance, in *KSR Int'l v. Teleflex Inc.*, 550 U.S. ____ (2007), page 14 of the slip opinion, the court cited with approval the following statement from *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006),

“[R]ejections of obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”

Applicant respectfully submits that the Examiner has failed to articulate any reason that would prompt one of ordinary skill to combine Abe and Yamamoto as proposed. Thus, Applicant respectfully submits that a *prima facie* case of obviousness has not been established for this additional reason.

Withdrawal of Rejection

At least for the reasons set forth above, it is respectfully submitted that independent claims 1 and 15 are in condition for allowance. Accordingly, claims 3-5 are allowable at least by virtue of their dependency on claim 1. Thus, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

Other Rejections

Claims 2 and 7-11 stand rejected under § 103(a) as being unpatentable over Abe and Yamamoto, and further in view of U.S. Patent No. 6,603,961 to Kuroda (hereafter “Kuroda”). Applicant respectfully submits that Kuroda fails to remedy the deficiencies of Abe and Yamamoto as set forth above in connection with independent claim 1. In fact, as shown in Fig. 3 and 4, Kuroda’s invention does not perform demodulation until after the signal is output from the branch selecting circuit. Accordingly, Applicant submits that claims 2 and 7-11 are allowable at

least by virtue of their dependency on claim 1. Thus, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Claim 12 stands rejected under § 103(a) as being unpatentable over Abe, Yamamoto, and Kuroda, and further in view of U.S. Patent No. 5,697,083 to Sano (hereafter “Sano”). It is respectfully submitted that Sano fails to remedy the deficiencies of Abe and Yamamoto as set forth above in connection with independent claim 1. Particularly, Sano is relied upon merely to teach a threshold corresponding to gain adjustment (see Office Action at page 11, 5th paragraph). Further, as discussed above, Kuroda also fails to remedy the deficiencies of Abe and Yamamoto. Accordingly, Applicant respectfully submits that claim 12 is allowable at least by virtue of its dependency on claim 1. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

NEW CLAIMS

Applicant respectfully submits that the filing of new claims 16-18 do not add new matter to the application. Further, Applicant submits that new independent claim 17 recites a combination of features, which is neither taught nor suggested by the cited references.

CONCLUSION

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. The Examiner is respectfully requested to reconsider the outstanding rejections and issue a Notice of Allowance in the present application.

Should the Examiner believe that any outstanding matters remain in the present application, the Examiner is respectfully requested to contact Jason W. Rhodes (Reg. No. 47,305) at the telephone number of the undersigned to discuss the present application in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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